

CLAIMS

What is claimed is:

1 1. A structure, comprising:
2 a pliable sheet; and
3 first and second stationary supports supporting the sheet, the supports
4 oriented relative to one another such that a distance between the supports at one
5 part of the sheet is greater than a distance between the supports at another part of
6 the sheet.

1 2. The structure of claim 1, wherein the supports are rigid.

1 3. The structure of claim 1, wherein the first support is curved.

1 4. The structure of claim 1, wherein the first and second supports are
2 curved.

1 5. The structure of claim 1, wherein each of the first and second supports
2 comprise discontinuous segments, first ones of the segments spaced apart a first
3 distance at one part of the sheet and second ones of the segments spaced apart a
4 second distance less than the first distance at another part of the sheet.

1 6. The structure of claim 1, wherein the supports are integral to the sheet.

1 7. A structure, comprising:
2 a pliable sheet;
3 first and second supports extending along and supporting the sheet, the
4 supports oriented relative to one another such that a distance between the supports
5 at one part of the sheet is greater than a distance between the supports at another
6 part of the sheet; and
7 a protrusion extending along and protruding from the sheet between the
8 supports.

1 8. The structure of claim 7, wherein the supports extend along a first side
2 of the sheet and the protrusion protrudes from a second side of the sheet opposite
3 the first side.

1 9. The structure of claim 7, wherein the protrusion comprises a pliable
2 protrusion.

1 10. A structure, comprising:
2 a pliable sheet;
3 a generally V shaped support extending along and contacting one side of the
4 sheet; and
5 a pliable strip attached to or integral with the sheet, the strip positioned
6 between the supports along a second side of the sheet opposite the first side.

1 11. A structure, comprising:
2 a span of flexible material;
3 a pair of elongated supports supporting the span, the supports oriented
4 relative to one another in a generally V shaped configuration such that a distance
5 between the supports at one part of the span is greater than a distance between the
6 supports at another part of the span; and
7 an elastomeric pad affixed to or integral with the flexible material between the
8 supports.

1 12. A sheet media input structure for a sheet media processing device,
2 comprising:
3 a sheet media supporting surface; and
4 a media sheet separator downstream from the supporting surface along a
5 media path that extends from the supporting surface to and along the separator, the
6 separator configured to separate a top sheet on the stack from a next-to-top sheet in
7 the stack by resisting the movement of sheets along the media path and wherein the
8 degree of resistance varies along the length of the separator.

1 13. The structure of claim 12, wherein the resistance varies from a greater
2 resistance at an upstream part of the separator to a lesser resistance at a
3 downstream part of the separator.

1 14. The structure of claim 13, wherein the separator comprises:
2 a pliable sheet;
3 first and second supports extending along and supporting the sheet, the
4 supports oriented relative to one another such that a distance between the supports
5 at the downstream part of the separator is greater than a distance between the
6 supports at the upstream part of the separator ; and
7 a protrusion extending along and protruding from the sheet between the
8 supports.

1 15. The structure of claim 1, wherein the separator comprises:
2 a span of flexible material;
3 a pair of elongated supports supporting the span, the supports oriented
4 relative to one another in a generally V shaped configuration such that a distance
5 between the supports at a first part of the span is greater than a distance between
6 the supports at a second part of the span; and
7 an elastomeric pad affixed to or integral with the flexible material between the
8 supports.

1 16. The structure of claim 15, wherein the second part of the span is
2 upstream along the media path from the first part of the span.

1 17. The structure of claim 16, wherein the pad is oriented at an obtuse
2 angle relative to the supporting surface.

1 18. A sheet media input structure for a sheet media processing device,
2 comprising:
3 a sheet media supporting surface; and

4 a media sheet separator downstream from the supporting surface along a
5 media path that extends from the supporting surface to and along the separator, the
6 separator comprising
7 a span of flexible material,
8 a pair of elongated supports supporting the span, the supports oriented
9 relative to one another in a generally V shaped configuration such that a distance
10 between the supports at a first part of the span is greater than a distance between
11 the supports at a second part of the span, the second part of the span upstream
12 along the media path from the first part of the span, and
13 an elastomeric strip affixed to or integral with the flexible material between the
14 supports, the pad oriented at an obtuse angle relative to the supporting surface.

1 19. The structure of claim 18, further comprising a sloped wall oriented at
2 an obtuse angle relative to the supporting surface and wherein the strip extends
3 along the wall.

1 20. A printer, comprising:
2 a print engine;
3 a sheet media input surface;
4 a pick/feed mechanism operative to move media sheets from the input
5 structure to the print engine along a media path;
6 a controller configured to control operations of the print engine and the
7 pick/feed mechanism; and
8 the input structure including a sheet media supporting surface and a media
9 sheet separator downstream from the supporting surface along the media path, the
10 separator configured to separate a top sheet on the stack from a next-to-top sheet in
11 the stack by resisting the movement of sheets along the media path and wherein the
12 degree of resistance varies along the length of the separator.

1 21. The printer of claim 20, wherein the separator comprises:
2 a pliable sheet;
3 first and second supports extending along and supporting the sheet, the
4 supports oriented relative to one another such that a distance between the supports
5 at one part of the sheet is greater than a distance between the supports at another
6 part of the sheet; and
7 a protrusion extending along and protruding from the sheet between the
8 supports.

1 22. The printer of claim 20, wherein the separator comprises:
2 a span of flexible material;
3 a pair of elongated supports supporting the span, the supports oriented
4 relative to one another in a generally V shaped configuration such that a distance
5 between the supports at a first part of the span is greater than a distance between
6 the supports at a second part of the span; and
7 an elastomeric pad affixed to or integral with the flexible material between the
8 supports.

1 23. A structure, comprising:
2 a flexible span; and
3 a means for supporting the span such that the flexibility of the span varies
4 along one dimension.

1 24. A structure, comprising:
2 a pliable pad;
3 a means for supporting the pad;
4 a means for varying the resistance of the pad to the movement of a media
5 sheet along the pad.

1 25. In a sheet media processing device having a sheet media input tray
2 and a media path extending from the input tray, a method comprising:
3 moving a media sheet from the input tray along the media path;

4 resisting movement of the sheet at a location immediately downstream from
5 the input tray along the media path; and
6 varying the resistance to movement of the sheet from a higher resistance to a
7 lower resistance as the sheet moves along the media path.